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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/659,831  | 09/10/2003  | Peter J. Black       | 990486D1            | 5958             |
| 23596 7590 12/17/2008<br>QUALCOMM INCORPORATED<br>5775 MOREHOUSE DR.<br>SAN DIEGO, CA 92121 |             |                      |                     |                  |
| EXAMINER  |             |                      |                     |                  |
| TSEGAYE, SABA   |             |                      |                     |                  |
| ART UNIT  |             | PAPER NUMBER         |                     |                  |
| 2419  |             |                      |                     |                  |
| NOTIFICATION DATE   |             | DELIVERY MODE        |                     |                  |
| 12/17/2008  |             | ELECTRONIC           |                     |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/659,831

**Applicant(s)**

BLACK ET AL.

**Examiner**

SABA TSEGAYE

**Art Unit**

2419

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 5, 6 and 12-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6 and 12-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

1. This Office Action is in response to the amendment filed 11/06/08. Claims 1-3, 5, 6 and 12-17 are pending. Currently no claims are in condition for allowance.

***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, a first device, a second device, a first PN generator and a second PN generator must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As shown in figs. 1 and 2, a transmitter that includes a PN generator (120) and a transmitter (130). The PN generator provides a set of PN sequences and the transmitter 130 buffers and amplifies an IF modulated signal and upconverts the signal to a radio frequency (see paragraphs 0014 and 0025-0026). Therefore, the specification does not adequately disclose **an apparatus comprising: a first device to transmit to transmit at a first frequency; a second device to transmit at a second frequency; a first PN generator and a second PN generator.**

***Claim Rejections - 35 USC § 103***

5. Claims 1-3, 5, 6, and 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang et al. (US 6,731,674 B1) in view of McDonough (US 6, 452,959).

Regarding claims 1, 12 and 15, Yang discloses, in Fig. 14, an apparatus, comprising:

a first device to transmit at a first frequency (see fig. 12; 1<sup>st</sup> channel signal);  
a first PN generator to generate a first PN sequence at a first offset (1217);  
a first spreader to receive and spread a first pilot data with the first PN sequence (1411, 1423);  
a second device to transmit at a second frequency (fig. 12; 2<sup>nd</sup> channel signal);  
a second PN generator to generate a second PN sequence at a second offset (1217); and  
a second spreader to receive and spread a second pilot data with the second PN sequence (1411, 1425).

Yang does not disclose that the first PN sequence is generated from equations different from equations used to generate the second PN sequence.

McDonough teaches that a first PN sequence is generated based on a first polynomial and a second PN sequence is generated based on a second polynomial (column 12, line 65-column 13, line 7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ different equation, such as that suggested by McDonough, in the system of Yang in order provide methods and devices to simplify data generators and system circuitry operating in connection with the same (column 5, lines 5-7).

Regarding claim 2, Yang discloses the apparatus wherein the first frequency uses is different CDMA format than the second frequency (column 17, lines 48-56).

Regarding claim 3, Yang discloses device and method for generating PN sequence associated with IS-95A/IS-95B and future CDMA system that sports the variable data rate. Further, Yang discloses a channel transmitter for spreading channel signals using quasi-orthogonal codes and Walsh orthogonal codes in a CDMA communication system.

Regarding claims 5, 6, 13, 14, 16 and 17, Yang discloses a CDMA mobile communication system in IS-95A/IS-95B standards. According to IS-95 standards, the short code I-sequence is associated  $P_{1,2} = x^{15} + x^{13} + x^9 + x^8 + x^7 + x^5 + 1$  and Q-sequence is associated with the polynomial  $P_{Q,1} = X^{15} + x^{12} + x^{11} + x^{10} + x^6 + x^5 + x^4 + x^3 + 1$ . Further, McDonough teaches these limitations; see column 13, lines 1-44.

#### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1-3, 5, 6 and 12-17 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues that Yang fails to teach the claimed “first spreader to receive and spread a first pilot data” and “second spreader to receive and spread a second pilot data.” Examiner respectfully disagrees. Yang clearly discloses that a first spreader 1411 receiving a first channel signal, multiplies the received first channel signal by a Walsh orthogonal code  $W_i$  to output spread signals  $d_{i1}$  (a first pilot data) and  $d_{q1}$  (a second pilot data) (column 17, lines 62-65) see also instant application fig. 2, (220A, 222A and 222B). In response to Applicant's argument that “McDonough does not in fact teach different equations used to generate first and second PN sequences....polynomial equations found in lines 1-6 of col. 13 in McDonough are in-phase I and quadrature Q sequences that would be used by a single PN generator for generating a signal PN

*sequence compliant with IS-95 standards for a spreader. McDonough does not teach or suggest a second pair of I and Q sequences different for the disclosed I and Q polynomial sequences in lines 1-5 of col. 6 that would be needed to generate a second, distinct PN sequence for a second spreader...."* Examiner respectfully disagrees. The limitations on which the Applicant relies are not in the claims. It is the claims that define the claimed invention, and it is claims, not specifications that are anticipated or unpatentable. Constant V. advanced Micro-devices states, "A general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references does not comply with the requirements of this section." Furthermore, as pointed out above, the instant specification does not adequately describe first and second PN generators and first and second device to transmit at first and second frequencies. Applicant has failed to specifically point out how the language of the claims patentably distinguishes them for the references.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SABA TSEGAYE whose telephone number is (571)272-3091. The examiner can normally be reached on Monday-Friday (7:30-5:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on (571) 272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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12/2/08